

Trace Atmospheric Gas Analyzer (TAGA)

TAGA IS A SELF CONTAINED MOBILE LAB

The Trace Atmospheric Gas Analyzer (TAGA) is a self-contained mobile laboratory capable of real-time sampling and analysis in the low parts per billion level of outdoor air or emissions from various environmental sources and concerns. In addition, the TAGA has specialized sampling equipment for measuring indoor air and at remote locations. The TAGA is maintained and operated by the [National Environmental Response Team \(ERT\)](#) based at Edison, NJ.



EXPECTED USES OF TAGA

Some of the expected uses for the TAGA include real-time emission studies sites such as [Superfund](#), [Brownfield](#) and [RCRA](#). The air monitoring and analysis instruments aboard the TAGA insure that such site assessments and investigations are done in a safe manner and that airborne contamination from sites is identified and tracked. The TAGA can be used in assessment, removal, and remediation efforts to track their progress and to monitor that air emissions from such waste disposal sites and operations are within acceptable limits. Investigations of uncontrolled releases from chemical spills, unknown or suspected sources of "bad" odors such as nearby chemical or refinery plant operations, indoor airborne contaminants (such as misapplied pesticides) are other examples of possible uses of the TAGA.

INSTRUMENTATION AVAILABLE IN THE TAGA

The TAGA unit mobile laboratory can also carry equipment (SUMMA canisters, Bucket air samplers, Tedlar bags, resin beds, etc.) for sampling and capture of emissions from various environmental sources for purposes of on-board or fixed laboratory analysis. This sampling and analysis ability in either real-time or by fixed laboratory further increases the versatility, scope, and quality assurance of the sampling and analysis plans. The unit is currently equipped with several gas chromatographs to aid in identification and confirmation of analysis and can be equipped with other instruments which may be available such as portable or field units for GC/MS or organic compounds or X-Ray Fluorescence for inorganic metals.



TAGA capability and performance from September 11, 2001

The TAGAs have responded to both the World Trade Center (WTC) disaster and the anthrax found in the Hart Senate Office Building. In the latter, we used the TAGA to monitor for ClO₂ (chlorine dioxide) in the ambient air near residences adjacent to the Hart Building. The low detection limits for ClO₂ – 900 ppq (parts per quadrillion by volume) in real time – was more than sufficient to meet the action limits imposed by the Washington DC, which was 25 ppb (parts per billion by volume) for 15 minutes at a location.

OPERATION OF THE TAGA

The TAGA unit is operated by a contractor to ERT at Edison, NJ. Typically a driver for the van, an operator for the instruments and data system is accompanied by one or more EPA chemists.

TAGA CONTACT POINTS

The TAGA is deployed to augment the OSC's capability and should be deployed by the EPA OSC so operations can be coordinated. The EPA OSC will arrange for a TAGA deployment.

